

## WHAT IS CLAIMED IS:

1. A polishing slurry, comprising:  
an abrasive;  
deionized water;  
a pH controlling agent; and  
polyethylene imine having a molecular structure of  
[-CH<sub>2</sub>CH<sub>3</sub>N(CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)-]<sub>x</sub>[-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>-]<sub>y</sub>, where x and y are positive integers.

2. The polishing slurry of claim 1, wherein the polyethylene imine comprises more than 0.02 wt% of the polishing slurry.

3. The polishing slurry of claim 1, further comprising a choline derivative.

4. The polishing slurry of claim 2, further comprising a choline derivative.

5. The polishing slurry of claim 3, wherein the choline derivative is choline chloride.

6. The polishing slurry of claim 4, wherein the choline derivative is choline chloride.

7. The polishing slurry of claim 5, wherein the polyethylene imine comprises more than 0.02 wt% of the polishing slurry.

8. The polishing slurry of claim 3, wherein the choline derivative is one selected from the group consisting of choline chloride, choline base, choline bromide, choline iodide, choline dihydrogen citrate, choline bitartrate, choline bicarbonate, choline citrate, choline ascobate, choline borate, choline theophyllinate, choline gluconate, acetylcholine chloride, acetylcholine bromide, and methacholine chloride.

9. The polishing slurry of claim 4, wherein the choline derivative is one selected from the group consisting of choline chloride, choline base, choline bromide, choline iodide, choline dihydrogen citrate, choline bitartrate, choline bicarbonate, choline citrate, choline ascobate, choline borate, choline theophyllinate, choline gluconate, acetylcholine chloride, acetylcholine bromide, and methacholine chloride.

10. The polishing slurry of claim 1, wherein the abrasive is one selected from the group consisting of silica, alumina, titania, zirconia, germania, and ceria.

11. The polishing slurry of claim 1, wherein one of x and y may have a value of zero (0)..

12. The polishing slurry of claim 3, wherein the polyethylene imine comprises 0.5 wt% of the polishing slurry, and the choline derivative comprises 1.3 wt% of the polishing slurry.

13. A chemical mechanical polishing method, comprising simultaneously removing a conductive layer, a silicon oxide layer and a silicon nitride layer using a polishing slurry comprising an abrasive, deionized water, a pH controlling agent, and

polyethylene imine having a molecular structure of  
[-CH<sub>2</sub>CH<sub>3</sub>N(CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)-]<sub>x</sub>[-CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>-]<sub>y</sub>, where x and y are 0 or positive integers.

14. The method of claim 13, wherein the silicon oxide layer is one selected from the group consisting of a borophosphosilicate glass (BPSG), a phosphoresilicate glass (PSG), a borosilicate glass (BSG), a high density plasma (HDP) silicon oxide layer, an undoped silicate glass (USG), a high thermal (HT)-USG, and a plasma enhanced (PE)-silicon oxide layer.

15. The method of claim 13, wherein the silicon nitride layer is a dielectric material having a basic formula of Si<sub>3</sub>N<sub>4</sub>.

16. The method of claim 13, wherein the polyethylene imine comprises more than 0.02 wt% of the polishing slurry.

17. The method of claim 16, further comprising adding a choline derivative to the polishing slurry, wherein relative removal rates of the silicon oxide layer and the silicon nitride layer are reduced while maintaining a larger removal rate of the conductive layer, and the removal rate of the silicon oxide layer is slightly greater than the removal rate of the silicon nitride layer.

18. The method of claim 17, wherein the choline derivative is choline chloride.

19. The method of claim 17, wherein the choline derivative is one selected from the group consisting of choline chloride, choline base, choline bromide, choline iodide, choline dihydrogen citrate, choline bitartrate, choline bicarbonate, choline citrate, choline ascorbate, choline borate, choline theophyllinate, choline gluconate, acetylcholine chloride, acetylcholine bromide, and methacholine chloride.

20. The polishing slurry of claim 13, wherein the polyethylene imine comprises more than 0.02 wt% of the polishing slurry, and further comprising adding a choline derivative to the polishing slurry, wherein removal rates of the silicon oxide layer and the silicon nitride layer are reduced while maintaining a larger removal rate of the conductive layer.